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09/923,427	08/08/2001	Yasuo Hira	500.40449X00	9948
24956 7590 02/27/2007 MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EXAMINER COUGHLAN, PETER D	
			ART UNIT 2129	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/923,427

Applicant(s)

HIRA ET AL.

Examiner

Peter Coughlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

1. This office action is in response to an AMENDMENT entered November 20, 2006 for the patent application 09/923427 filed on August 8, 2001.
2. All previous Office Actions are fully incorporated into this Non-Final Office Action by reference.

Status of Claims

3. Claims 1-47 are pending.

35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-47 are rejected under 35 U.S.C. 101 for nonstatutory subject matter.

The computer system must set forth a practical application of that § 101 judicial

exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77. The invention is ineligible because it has not been limited to a substantial practical application. Providing solutions to problems is not a practical application since the claims are in the abstract form and can apply to a plurality of applications and thus not a 'practical application.' The result has to be a practical application. Please see the interim guidelines for examination of patent applications for patent subject matter eligibility published November 22, 2005 in the official gazette.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101. The phrase 'solving a plurality of problems', is not clear in its purpose or scope. Some practical applications to the applicant's statement would be the detection of birth defects, cost analysis of airline ticket pricing, and earthquake prediction. Such results have not been claimed.

The invention must be for a practical application and either:

- 1) specify transforming (physical thing) or
- 2) have the FINAL RESULT (not the steps) achieve or produce a useful (specific, substantial, AND credible), concrete (substantially repeatable/ non-unpredictable), AND

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tangible (real world/ non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.

Claims that produce a 'solution' to a given 'plurality of problems' are not statutory. There must be a result that is a practical application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 14, 17, 18, 21, 22, 25-27, 30-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims state the existence of an 'analyzing function' or something that can analyze. No description of this 'analyzing function' or an example of something that is analyzed is described within the specification.

These claims must be amended or withdrawn from consideration.

Claims 15, 19, 23, 27, 30-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims state the description of a 'analyzing technique' but there is no description of a specific technique or protocol that is used for analyzing within the specification.

These claims must be amended or withdrawn from consideration.

Claims 15, 19, 23, 27, 30-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims state the existence of an 'analyzing instrument' but no such description or function of said instrument exists within the specification.

These claims must be amended or withdrawn from consideration.

Claims 2, 3, 4, 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims state the purpose of displaying examples of solutions are to 'urge the user to think up an idea for a new idea.' This is never mentioned within the specification explaining how the display of solutions acts as a catalysis to promotion of 'urge the user to think up an idea for a new idea.'

These claims must be amended or withdrawn from consideration.

Claims 1, 8, 11, 12, 30-44, 46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. All these claims state the invention 'determines which database is to be searched' but this is not mentioned within the specification. In addition, the specification does not even mention which type of classification method is to be used when deciding which database is to be searched. Also what is missing from the specification is the specific algorithm that is used to decide which database is to be searched. For example, if the specification states that a 'clustering technique' is used to determine which database is to be searched (which it does not state) what is missing is what clustering algorithm is to be employed.

These claims must be amended or withdrawn from consideration.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This claim states the definition of the term 'data accepting' which is not mentioned within the specification but only in claim 9. It is not clear what 'data to be improved' means.

This claims must be amended or withdrawn from consideration.

Claims 8, 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims state the existence of a 'solution database', but no such database is described within the specification. In addition, claim 10 states that the 'solution database' is concerned with 'received data to be improved' which is also not mentioned within the specification.

These claims must be amended or withdrawn from consideration.

Claims 17, 21, 25, 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This claim states 'comprising a step of displaying a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection' but there is no way of directly know which sample has what 'degree of difficulty' of destroying prior to destroying it. Applicant fails to disclose a method or system of determining the 'degree of difficulty' of destroying the sample without destroying the sample.

These claims must be amended or withdrawn from consideration.

Claims 15, 19, 23, 27, 30, 31, 32, 33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims use the term 'analysis condition'. 'Analysis condition' is not accurately described within the specification and the example given is not clear what the domain of 'analysis condition' represents.

These claims must be amended or withdrawn from consideration.

Due to the number of 35 U.S.C. 112, first paragraph rejections, the examiner has provided a number of examples of the claim deficiencies in the above rejection(s),

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however, the list of rejections may not be inclusive. Applicant should refer to these rejections as examples of deficiencies and should make all necessary corrections to eliminate the 35 U.S.C. 112, first paragraph problems and place the claims in proper format.

Due to the vagueness and a lack of a clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "new solutions" in claims 1, 8, 12, 30, 31, 32, 33, 34 is a relative term which renders the claim indefinite. The term "new solutions" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In paragraph 0058 the specification states that it is 'likely' that a 'new solution' to the problem. The term 'likely' is a relative term.

These claims must be amended or withdrawn from consideration.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-14, 16, 20, 24, 28, 30-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al in view of Thalhammer-Reyero. (U. S. Patent 6014647, referred to as **Nizzari**; U. S. Patent 5980096, referred to as **Thalhammer**)

Claim 1

Nizzari teaches receiving, at the site server, an instruction including an information on a database to be searched related to a problem input by a user (**Nizzari**, C3:33 through C4:7, C5:28-36; 'Site server' of applicant is equivalent to 'web server that is part of the runtime business system' of Nizzari. 'Receiving ... instructions ... information on a database' of applicant is equivalent to 'Retrieval services' of Nizzari.); searching either one of a meta database(**Nizzari**, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.) or a case database(**Nizzari**, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.) in accordance with the information, the meta database storing information on common rules to resolve each of the plurality of problems, the common rules being extracted

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from the, plurality of problems and being classified according to characteristics of each of the plurality of problems(Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizari.), the meta database being provided within a second apparatus including a content offer server in advance(Nizzari, C3:3 through C4:7; 'Second apparatus including a content server' of applicant is equivalent to 'written correspondence is received ... typically in batches' of Nizzari.), the case database storing information on a plurality of problems which have occurred in the past, and the case database being provided within a server(Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.), determining whether or not the meta database is to be searched in accordance with the information on the database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching said meta database, if it is determined that the meta database is to be searched, or searching said case database, if it determined that the meta database is not to be searched, for a rule for solving the problem in response to the instruction received, the meta database including a plurality of rules extracted from a plurality of

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actual examples regarding new solutions for any of the plurality of problems. (**Nizzari**, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the plurality of problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the plurality of problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions.

(**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications

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which is equivalent to 'new solutions' of applicant.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by being able to increase or decrease a parameter input of a physical as taught by Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the plurality of problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions.

For the purpose of altering the model to test for improved results.

Nizzari teaches displaying on said display at the site server, information on said data regarding the examples of new solutions to solve the problem related to the instruction input with corresponding instruments and with corresponding rules in the plurality of rules in the meta database. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 2

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Nizzari teaches displaying a plurality of solution rules based on said meta rule searched out from said meta database in order to urge the user to think up an idea for a new solution. (Nizzari, C4:51-63; 'Urge the user to think up an idea for a new solution' of applicant is equivalent to 'customization can include introduction of additional entities, relationships and attributes not represented in the transaction databases' of Nizzari.)

Claim 4

Nizzari teaches displaying a plurality of solution rules based on said meta rule searched out from said meta database, and a plurality of proposed contents that offer a solution based on said solution rules in order to urge the user to think up an idea for a new solution. (Nizzari, C4:51-63; If 'customization' of entities and relationships can occur, then these rules must be displayed. Urge the user to think up an idea for a new solution' of applicant is equivalent to 'customization can include introduction of additional entities, relationships and attributes not represented in the transaction databases' of Nizzari.)

Claim 5

Nizzari teaches displaying a plurality of solution rules based on said meta rule searched out from said meta database, a plurality of examples of solution searched out from said case database, and a plurality of contents that offer said solution examples in order to urge the user to think up an idea for a new solution. (Nizzari, C4:51-63, C4:64 through C5:27; If 'customization' of entities and relationships can occur, then these rules

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must be displayed. Urge the user to think up an idea for a new solution' of applicant is equivalent to 'customization can include introduction of additional entities, relationships and attributes not represented in the transaction databases' of Nizzari. 'Displaying a plurality of examples' of applicant is equivalent to 'contain information that is accessed by retrieval services and provided to application in response to the request' of Nizzari.)

Claim 6

Nizzari teaches in order for each customer to be offered customized solutions and contents, a company database is provided that is concerned with companies which said customer belong to, and searched for each customer's information, and problems and solutions supposed for each customer are enumerated by use of said search result. (Nizzari, C8:4-15; 'Concerned with companies' which customers belong to is equivalent to 'Grouping can also be used to identify customers that belong to a particular market place' of Nizzari.)

Claim 7

Nizzari teaches in order for each customer to be offered customized solutions and contents, a company database is provided that is concerned with companies which said customers belong to, and a problem from each customer is easily solved by displaying said contents selected according to the type of said customers. (Nizzari, C8:4-15; 'Company database' of applicant is equivalent to 'Grouping can also be used to identify customers that belong to a particular market place' of Nizzari. With common

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needs and goals among the customers of a specific group, utilizing 'grouping' information could aid other members within the same grouping or company.)

Claim 8

Nizzari teaches means for accepting, at a first apparatus, data including an information on a database to be searched about a problem sent from a demander who requests for providing an information service(Nizzari, C5:28-36; 'Means for accepting ... information on a database' of applicant is equivalent to 'retrieval services' of Nizzari.); means for determining whether or not a meta database is to be searched in accordance with the information on the database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); means for searching for a rule for solving the problem in the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), if it is determined that the meta database is not to be searched, in accordance with the information, and in response to an instruction input by the demander, where the meta database and the case database are provided in a second apparatus including a content offer server in advance(Nizzari, C3:3 through C4:7;

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'Second apparatus including a content server' of applicant is equivalent to 'written correspondence is received ... typically in batches' of Nizzari.), the meta database including a plurality of rules extracted from a plurality of actual examples(**Nizzari**, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.),

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database including a new solution to solve the problem, each example including an instrument having a predetermined function according to the plurality of rules to determine an information on a relationship between a solution and a problem to be solved thereby.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database including a new solution to solve the problem, each example including an instrument having a predetermined function according to the plurality of rules to determine an information on a relationship between a solution and a problem to be solved thereby. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new

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solutions' of applicant.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by being able to increase or decrease a parameter input of a physical as taught by Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the plurality of problems, each example including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions.

For the purpose of altering the model to test for improved results.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems(Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Metadata' of Nizzari is item #252 in figure 2. Inside item #252 is item #254 which contains 'business rules' which is equivalent to 'common rules' of applicant.), and wherein the case database stores information on a plurality of problems, which have occurred in the past(Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and means for displaying

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on a display connected to the first apparatus, data regarding the examples of new solutions to solve the problem of the accepted data with corresponding instruments and with corresponding rules in the plurality of rules in the meta database. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 9

Nizzari teaches wherein said data accepting means receives data to be improved. (Nizzari, C5:37-46; 'Data to be improved' of applicant is equivalent to 'modify data' of Nizzari.)

Claim 10

Nizzari teaches wherein said solution database stores said data of said solution rules concerned with said problem and said received data to be improved in association with each other. (Nizzari, C5:47-55; 'Solution database' of applicant is equivalent to the 'interaction tables' which can be modified of Nizzari.)

Claim 11

Nizzari teaches accepting, at a first apparatus, data regarding an instruction of a problem by a user including an information on a database to be searched; receiving

said data of said problem(Nizzari, C5:28-36, C4:64 through C5:27; 'Data regarding an instruction ... information on a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'Receiving ... data' of applicant is equivalent to 'request to receive particular information' of Nizzari.); determining whether or not a meta database is to be searched in accordance with the information on a database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), if it is determined that the meta database is not to be searched, for a rule for solving the problem, in response to the instruction and in accordance with the information on the database to be searched, where the meta database and the case database have been provided within a second apparatus including a content offer server in advance. (Nizzari, C3:3 through C4:7; 'Second apparatus including a content server' of applicant is equivalent to 'written correspondence is received ... typically in batches' of Nizzari.), the meta database including a plurality of rules extracted from a plurality of actual examples(Nizzari, C6:59 through C7:21; Searching for a rule for

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solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database including a new solution to solve the problem, each example including an instrument having a predetermined function according to the plurality of rules to determine an information on a relationship between the solution and the problem to be solved thereby.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database including a new solution to solve the problem, each example including an instrument having a predetermined function according to the plurality of rules to determine an information on a relationship between the solution and the problem to be solved thereby. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by having the ability to alter a physical or chemical parameter and noting the results as taught by

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Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database including a new solution to solve the problem, each example including an instrument having a predetermined function according to the plurality of rules to determine an information on a relationship between the solution and the problem to be solved thereby.

For the purpose of altering the model to test for improved results.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and, being classified according to characteristics of each of the plurality of problems(Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and wherein the case database stores information on a plurality of problems, which have occurred in the past (Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and displaying on a display at said first apparatus, data regarding the examples of new solutions to solve the problem of the accepted data with corresponding instruments and with corresponding rules in the plurality of rules in the meta database. (Nizzari, C4:64 through C5:46; 'Displaying' of applicant is disclosed by 'external application' of Nizzari.

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Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 12

Nizzari teaches accepting, at a first apparatus, data regarding an instruction of a problem by a user including an information on a database to be searched; receiving said data of said problem(Nizzari, C5:28-36, C4:64 through C5:27; 'Data regarding an instruction ... information on a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'Receiving ... data' of applicant is equivalent to 'request to receive particular information' of Nizzari.); determining whether or not a meta database is to be searched in accordance with information on the database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching, in accordance with the information on the database to be searched, the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), if it is determined that the meta database is not to be searched, for a rule for solving the problem, where the meta database and the case database have been provided within a second apparatus

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including a content offer server in advance(**Nizzari**, C3:3 through C4:7; 'Second apparatus including a content server' of applicant is equivalent to 'written correspondence is received ... typically in batches' of **Nizzari**.), the case database having solution rules stored in association with said data regarding a solution to solve the problem, and the meta database having examples of new solutions in association with said problem, each of the examples including an instrument having a predetermined function according to the rules (**Nizzari**, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of **Nizzari**.)

Nizzari does not teach each of the rules being physical or chemical rules having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advances.

Thalhammer teaches each of the rules being physical or chemical rules having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advances. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of **Thalhammer**. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of **Thalhammer**.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of **Nizzari** by having information about the increase or decrease of a parameter as taught by **Thalhammer** to have each of the physical or chemical rules indexed by both an

improving physical or chemical parameter and a deteriorating physical or chemical parameter in advances.

For the purpose of having a source of knowledge wherein the changing of a parameter leads to a known result.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems(Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and, wherein the case database stores information on a plurality of problems which have occurred in the past (Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and extracting and displaying, at a display at the first apparatus, a new solution corresponding to a result of having searched for said solution rules, and with corresponding rules in the plurality of rules in the meta database. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Nizzari teaches said function to extract said solution corresponding to said solution rules has a function to search a content database having information of solutions associated with said solution rules. (**Nizzari**, Figure 1; 'Function to extract said solution' of applicant is equivalent to 'transaction systems' of Nizzari.)

Claim 14

Nizzari teaches the predetermined function of the instrument comprises an analyzing function. . (**Nizzari**, Figure 2; 'Analyzing function' of applicant is equivalent to 'pattern recognition' of Nizzari.)

Claim 16

Nizzari teaches a step of displaying a history of said instructions input by said user. (**Nizzari**, C8:57 through C9:6, C4:64 through C5:46; 'History of instructions' of applicant is equivalent to 'agent's application retrieves a history of recent transactions for that customer using retrieval services' of Nizzari. 'Displaying' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be 'displaying'.)

Claim 20

Nizzari teaches the displaying means further displaying a history of said instructions input by said demander. (**Nizzari**, C8:57 through C9:6, C4:64 through

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C5:46; 'History of instructions' of applicant is equivalent to 'agent's application retrieves a history of recent transactions for that customer using retrieval services' of Nizzari. 'Displaying' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be 'displaying'.)

Claim 24

Nizzari teaches displaying a history of said instructions of said user. (**Nizzari**, C8:57 through C9:6, C4:64 through C5:46; 'History of instructions' of applicant is equivalent to 'agent's application retrieves a history of recent transactions for that customer using retrieval services' of Nizzari. 'Displaying' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be 'displaying'.)

Claim 28

Nizzari teaches another function further displaying a history of said instructions of said user. (**Nizzari**, C8:57 through C9:6, C4:64 through C5:46; 'History of instructions' of applicant is equivalent to 'agent's application retrieves a history of recent transactions for that customer using retrieval services' of Nizzari. 'Displaying' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it

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follows that the arrow from the 'retrieval system' to the 'application' would be 'displaying'.)

Claim 30

Nizzari teaches determining whether or not a meta database is to be searched in accordance with information on a database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching, at the site server, in response to an instruction including the information on the database to be searched related to the problem input by a user, the meta database, if it is determined the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), if it is determined that the meta database is not to be searched, for a rule for solving a problem, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems(Nizzari, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.),

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating

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physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer.

'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. There is no specific 'analytical technique' or 'analytical instrument' within the specification.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by choosing a state and region to test,

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based on input altered parameters as taught by Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

For the purpose of testing altered models of a simulation based on altered input parameters.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems(Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and wherein the case database stores information on a plurality of problems which have occurred in the past(Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and displaying data on said display at the site server regarding the examples of new solutions to solve the problem input by the user along with corresponding instrument

based on a search result and with corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 31

Nizzari teaches means for accepting data including an information on a database to be searched about a problem sent from a demander who requests for providing an information service(Nizzari, C5:28-36, C4:64 through C5:27; 'Accepting data ... information on a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'Demander who requests' of applicant is equivalent to 'request to receive particular information' of Nizzari.); means for determining whether or not a meta database is to be searched in accordance with the information on the database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database' also access to the meta data which contains data definitions, data classes and relationships between entities.); means for searching the meta database, if it is

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determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database, if it is determined that the meta database is not to be searched (Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), where the meta database and the case database have been provided in a content offer server in advance, for a rule for solving the problem in response to an instruction input by the demander and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. (Nizzari, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each. of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each. of the examples including an

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analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. There is no specific 'analytical technique' or 'analytical instrument' within the specification.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by having the ability to alter parameters of a simulation and seeing the results based on indexed rules as taught by Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each. of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

For the purpose of testing model simulations based on altered input parameters.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems (Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and wherein the case database stores information on a plurality of problems, which have occurred in the past (Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past' of applicant is equivalent to 'a group may be defined to a set of events that occurred during a particular time period.'). and means for displaying data regarding the examples of new solutions to solve the problem along with corresponding instruments based on a search result and with corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphological observation is selected as the analysis selection. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Nizzari teaches receiving data of a problem in an instruction by a user, the instruction including an information on a database to be searched(Nizzari, C5:28-36, C4:64 through C5:27; 'Information on a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'Receiving data' of applicant is equivalent to 'request to receive particular information' of Nizzari.); determining whether or not a meta database is to be searched in accordance with the information on the database to be searched (Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database, if it is determined that the meta database is not to be searched(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), where the meta database and the case database have been provided in a content offer server in advance, for a rule for solving the problem in response to the instruction and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. (Nizzari, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and an analytical instrument.

Thalhammer teaches each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and an analytical instrument. (**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. There is no specific 'analytical technique' or 'analytical instrument' within the specification.) It

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would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by altering parameters in a model simulation and seeing the outcome based on indexed information as taught by Thalhammer to have each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and an analytical instrument.

For the purpose of testing model simulations based on altered input parameters.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems (Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and wherein the case database stores information on a plurality of problems which have occurred in the past(Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and displaying

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data regarding the examples of new solutions to solve the problem along with corresponding instruments by use of a search result and with corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the new solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. (**Nizzari**, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 33

Nizzari teaches receiving data of a problem in an instruction by a user, the instruction including an information on a database to be searched(**Nizzari**, C5:28-36, C4:64 through C5:27; 'Information on a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'Receiving data' of applicant is equivalent to 'request to receive particular information' of Nizzari.); determining whether or not a meta database is to be searched in accordance with the information on the database to be searched (**Nizzari**, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); searching the meta database, if it is determined

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that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database, if it is determined that the meta database is not to be searched(Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.), in accordance with the information on a database to be searched, for a rule for solving the problem, where the meta database and the case database have been provided within a content offer server in advance, the case database having solution rules stored in association with said data regarding a new solution to solve the problem, and the meta database having examples of new solutions in association with said problem. (Nizzari, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach each of the rules being physical or chemical rules having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument, the instruction being related to a combination of a state selection, a part selection and an analysis condition of a selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

Thalhammer teaches each of the rules being physical or chemical rules having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument, the instruction being related to a combination of a state selection, a part selection and an analysis condition of a selection, and a corresponding solution

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comprising a combination of an analytical technique and the analytical instrument.

(**Thalhammer**, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. There is no specific 'analytical technique' or 'analytical instrument' within the specification.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by altering input parameters in a simulation model and testing the results based on a analytical technique using an analytical instrument as taught by Thalhammer to have each of the rules being physical or chemical rules having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument, the instruction being related to a combination of a state selection, a part selection and an analysis condition of a selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument.

For the purpose of testing model simulations based on altered input parameters.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems (**Nizzari**, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of

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Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.) wherein the case database stores information on a plurality of problems which have occurred in the past(Nizzari, C7:26-56; 'Case database' of applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and extracting and displaying a new solution corresponding to a result of having searched for said solution rules, history of input instruction, and a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 34

Nizzari teaches determining whether or not a meta database is to be searched in accordance with information on a database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships

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between entities.); searching, at the site, a meta database for a rule for solving a problem, if it has been determined that the meta database is to be searched. (Nizzari, C6:59 through C7:21; Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari.)

Nizzari does not teach said meta database containing a physical or chemical rule or solution having been indexed by both an improving physical or chemical parameter and deteriorating physical or chemical parameter in advance, where the meta database has been provided within a content offer server in advance, in response to an instruction and improving physical or chemical parameter and deteriorating parameter, or an actual example, or if it is determined that the meta database is not to be searched, searching a case database regarding a new solution to said problem in response to said problem input by a user.

Thalhammer teaches said meta database containing a physical or chemical rule or solution having been indexed by both an improving physical or chemical parameter and deteriorating physical or chemical parameter in advance, where the meta database has been provided within a content offer server in advance, in response to an instruction and improving physical or chemical parameter and deteriorating parameter, or an actual example, or if it is determined that the meta database is not to be searched, searching a case database regarding a new solution to said problem in response to said problem input by a user. (Thalhammer, abstract, C10:25-45, C4:11-30; 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of

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Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by altering input parameters and searching for results in the corresponding database as taught by Thalhammer to have said meta database containing a physical or chemical rule or solution having been indexed by both an improving physical or chemical parameter and deteriorating physical or chemical parameter in advance, where the meta database has been provided within a content offer server in advance, in response to an instruction and improving physical or chemical parameter and deteriorating parameter, or an actual example, or if it is determined that the meta database is not to be searched, searching a case database regarding a new solution to said problem in response to said problem input by a user.

For the purpose of looking for results of a query to aid in modeling of a simulation.

Nizzari teaches wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems (Nizzari, C5:37-46, Figure 2; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. 'Rules being extracted' of applicant is disclosed by the 'rules processing module' of Nizzari.), and wherein the case database stores information on a plurality of problems which, have occurred in the past(Nizzari, C7:26-56; 'Case database' of

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applicant is equivalent to 'interaction database' of Nizzari. 'Information on a plurality of problems which have occurred in the past ' of applicant is equivalent to 'a group may be defines to a set of events that occurred during a particular time period.); and displaying data, on a display at the site, regarding the examples of new solutions to solve the problem with corresponding rules. (Nizzari, C4:64 through C5:46; 'Displaying' solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 35

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 36

Nizzari teaches means for displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ...

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customer's past interactions' of Nizzari. 'Means of displaying' of applicant is obvious due to the fact to use of the 'interactive context' of Nizzari will provide the user with scanned letters, voice recordings and identities of previous points of contact.)

Claim 37

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 38

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 39

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Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (**Nizzari**, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 40

Nizzari teaches means for displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (**Nizzari**, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Means of displaying' of applicant is obvious due to the fact to use of the 'interactive context' of Nizzari will provide the user with scanned letters, voice recordings and identities of previous points of contact.)

Claim 41

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (**Nizzari**, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ...

customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 42

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

Claim 43

Nizzari teaches the step of displaying, on the display, data regarding a result of searching the meta database if it is determined that the meta database is to be searched. (Nizzari, C4:8-23; 'Step of displaying .. data regarding a result of searching the meta database' of applicant is equivalent to 'interaction context ... of information ... customer's past interactions' of Nizzari. 'Step of displaying' of applicant is equivalent to use of the 'interactive context' of Nizzari.)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 44, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al in view of Ahamed. (U. S. Patent 6014647, referred to as **Nizzari**; U. S. Patent 5628011, referred to as **Ahamed**)

Claim 44

Nizzari teaches means for accepting, at a first apparatus, data including information regarding a database to be searched about a problem, wherein the data is accepted from a user requesting an information service(Nizzari, C5:28-36, C4:64 through C5:27; 'Information regarding a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'User requesting' of applicant is equivalent to 'request to receive particular information' of Nizzari.); means for determining whether or not a meta database is to be searched in accordance with the information regarding a database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The

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'interaction tracking database also access to the meta data which contains data definitions, data classes and relationships between entities.); means for searching for a rule for solving the problem in the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database, if it is determined that the meta database is not to be searched. (Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.)

Nizzari does not teach wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter

Ahamed teaches wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and

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the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter. (**Ahamed**, C3:32-45; 'Desire to improve' of applicant is illustrated by 'providing suggestions to the user for further learning' of Ahmed. If Ahmed can provide 'suggestions' then there exists cross references to solutions which was asked for to 'desired-to-improved' solutions.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Nizzari by having databases that are crossed referenced with parameters that can be adjusted and corresponding results as taught by Ahmed to have the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter

For the purpose of using a rule and associated cross referenced information to determining the outcome of a model based on altered parameters for a possible improvement of the model.

Nizzari teaches means for displaying solutions to the problem. (**Nizzari**, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by

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'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claim 46

Nizzari teaches accepting, at a first apparatus, data including information regarding a database to be searched about a problem, wherein the data is accepted from a user requesting an information service(Nizzari, C5:28-36, C4:64 through C5:27; 'Information regarding a database' of applicant is equivalent to 'retrieval services' of Nizzari. 'User requesting' of applicant is equivalent to 'request to receive particular information' of Nizzari.); determining whether or not a meta database is to be searched in accordance with the information regarding a database to be searched(Nizzari, C4:64 through C5:46, Figure 2; 'Determination if the meta database is to be searched' of applicant is disclosed by the 'interaction tracking data' of Nizzari. The 'interaction tracking database' has access to the transaction database. The 'interaction tracking database' also access to the meta data which contains data definitions, data classes and relationships between entities.); searching for a rule for solving the problem in the meta database, if it is determined that the meta database is to be searched(Nizzari, C5:37-46; 'Meta database' of applicant is equivalent to 'metadata' of Nizzari.), or searching a case database, if it is determined that the meta database is not to be searched. (Nizzari, Figure 2; 'Case database' of applicant is equivalent to 'transaction database' of Nizzari.)

Nizzari does not teach wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter.

Ahamed teaches wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter. (**Ahamed**, C3:32-45; 'Desire to improve' of applicant is illustrated by 'providing suggestions to the user for further learning' of Ahamed. If Ahamed can provide 'suggestions' then there exists cross references to solutions which was asked for to 'desired-to-improved' solutions.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the

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teachings of Nizzari by using crossed referenced databases as taught by Ahamed to have wherein the meta database includes a table having a first plurality of entries including at least one desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter.

For the purpose of using a rule and associated cross referenced information to determining the outcome of a model based on altered parameters for a possible improvement of the model.

Nizzari teaches displaying solutions to the problem. (Nizzari, C4:64 through C5:46; 'Displaying solutions to the problem' of applicant is disclosed by 'external application' of Nizzari. Since the 'retrieval system' can retrieve information, it follows that the arrow from the 'retrieval system' to the 'application' would be the 'solutions to the problem'.)

Claims 45, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nizzari and Ahamed as set forth above, and further in view of Savitch. ('Problem Solving with C++', referred to as **Savitch**)

Claims 45, 47

Nizzari and Ahamed do not teach wherein the case database includes a second plurality of entries, including a field of the problem, a desired-to-improve parameter, a deteriorated parameter, a solution rule number, a problem name, and a solution to the problem.

Savitch teaches wherein the case database includes a second plurality of entries, including a field of the problem, a desired-to-improve parameter, a deteriorated parameter, a solution rule number, a problem name, and a solution to the problem. (**Savitch**, p302:1-10; Database entries of applicant is equivalent to a 'structure' of Savitch. In Savitch's example only three variables are defined, but there can be any number of variables. Variables can include, integers, reals, characters, Boolean, vectors, n dimensional arrays, and other structures static or dynamic. Applicant's database entry is just a combination of these variables.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Ahamed by setting up a format in which information can be referenced and accessed to cross reference contained information as taught by Savitch to have wherein the case database includes a second plurality of entries,

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including a field of the problem, a desired-to-improve parameter, a deteriorated parameter, a solution rule number, a problem name, and a solution to the problem.

For the purpose of generating a database structure which contains the required information and can be accessed to cross reference information.

Claim Rejections - 35 USC § 103

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nizzari and Thalhammer as set forth above, and further in view of Ahamed. (U. S. Patent 5628011, referred to as **Ahamed**)

Claim 3

Nizzari and Thalhammer do not teach displaying a plurality of examples of solution searched out from said case database in order to urge the user to think up an idea for a new solution.

Ahamed teaches displaying a plurality of examples of solution searched out from said case database in order to urge the user to think up an idea for a new solution. (**Ahamed**, C3:32-45; 'Displaying a plurality of examples' of applicant is illustrated by 'providing suggestions to the user for further learning' of Ahamed.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Thalhammer by displaying results as

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taught by Ahamed to have displaying a plurality of examples of solution searched out from said case database in order to urge the user to think up an idea for a new solution.

For the purpose of giving the user a chance to alter the input parameters to improve the results.

Claim Rejections - 35 USC § 103

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nizzari and Thalhammer as set forth above, and further in view of Kubo. (U. S. Patent 5677844, referred to as **Kubo**)

Claim 15

Nizzari and Thalhammer do not teach the instruction inputted by the user relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument.

Kubo teaches the instruction inputted by the user relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument. (**Kubo**, abstract, C1:55 through C2:9; Kubo discloses a simulation of predicting casting defects. The 'state selection' of applicant refers to the gas pressure used, the liquid is the molten metal and the solid refers to the finish casting.

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'Part selection' can refer to the porosity defects, which can occur on the surface(roughness), interior(decreased density) or both. 'Analysis condition' of applicant refers to the shape of the casting. The 'analytical technique' of applicant is equivalent to the repeating computation of liquid friction (f_L) at time t . 'Analytical instrument' of applicant is equivalent to ' $C_P(\delta T / \delta t)$ ' of Kubo.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Thalhammer by test a model based on state, region and test to be performed as taught by Kubo to have the instruction inputted by the user relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument.

For the purpose of having an invention which can handle more than one type of simulation based on the fact that state, region and analysis condition and technique can be changed.

Claim Rejections - 35 USC § 103

Claims 17, 18, 22, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nizzari and Thalhammer as set forth above, and further in view of Scholz. (U. S. Patent 5273802, referred to as **Scholz**)

Claim 17

Nizzari and Thalhammer do not teach a step of displaying a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection.

Scholz teaches a step of displaying a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. (**Scholz**, C19:48-59; 'Priority levels' of applicant is equivalent to 'different samples' of Scholz.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Thalhammer by sorting by 'difficulty in destroying' as taught by Scholz to have a step of displaying a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection.

For the purpose of starting from either end of the spectrum as needs require

Claims 18, 22, 26

Nizzari and Thalhammer do not teach the predetermined function of the instrument comprises an analyzing function.

Scholz teaches the predetermined function of the instrument comprises an analyzing function. (**Scholz**, C19:1-28; 'Instrument' of applicant is equivalent to 'Instron instrument' of Scholz. 'Analyzing function' of applicant is equivalent to 'compression

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function' of Scholz.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Thalhammer by using a function for analyzing purposes as taught by Scholz to have the predetermined function of the instrument comprises an analyzing function.

For the purpose of easily changing analyzing functions by simply changing a function itself.

Claim Rejections - 35 USC § 103

Claims 19, 21, 23, 25, 27, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nizzari, Thalhammer and Scholz as set forth above, and further in view of Kubo. (U. S. Patent 5677844, referred to as **Kubo**)

Claim 19, 23, 27

Nizzari, Thalhammer and Scholz do not teach wherein the instruction inputted by the demander relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument.

Kubo teaches wherein the instruction inputted by the demander relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument. (**Kubo**, abstract, C1:55 through C2:9; Kubo discloses a simulation of predicting casting defects. The 'state selection' of applicant refers to the

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gas pressure used, the liquid is the molten metal and the solid refers to the finish casting. 'Part selection' can refer to the porosity defects, which can occur on the surface(roughness), interior(decreased density) or both. 'Analysis condition' of applicant refers to the shape of the casting. The 'analytical technique' of applicant is equivalent to the repeating computation of liquid friction (f_L) at time t . 'Analytical instrument' of applicant is equivalent to ' $C_P(\delta T / \delta t)$ ' of Kubo.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari, Thalhammer and Scholz by being able to define state, region and structure in regards to technique and instrument used as taught by Kubo to have wherein the instruction inputted by the demander relates to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprises a combination of an analytical technique and an analytical instrument.

For the purpose of testing by analysis a current model that is defined by parameters.

Claims 21, 25, 29

Nizzari and Thalhammer do not teach the displaying means further displays a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection.

Scholz teaches the displaying means further displays a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. (**Scholz**, C19:48-59; 'Priority levels' of applicant is equivalent to 'different samples' of Scholz.) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the combined teachings of Nizzari and Thalhammer by being able to order instruments in level of difficulty as taught by Scholz to have the displaying means further displays a plurality of instruments in the solution with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection.

For the purpose of displaying information in order so that the user can prioritize requirements if needed.

Response to Arguments

5. Applicant's arguments filed on November 20, 2006 for claims 1-47 have been fully considered but are not persuasive.

6. In reference to the Applicant's argument:

A. Claims 1-5, 8-13, 34, and 43

The present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, provides a method for generating information non new solutions for solving a plurality of problems, where the generated information is output to a display at a site server. The method

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includes a step of receiving, at the site server, an instruction including information on a database to be searched related to a problem input by a user. The method also includes a step of searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past. The case database is provided within a server. The method also includes a step of determining whether or not the meta database is to be searched in accordance with the information regarding the case database to be searched. Another step includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server. According to the present invention the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Another step includes displaying on the display the data regarding the examples of new solutions to solve the problem with corresponding instruments and with corresponding rules in the plurality of rules in the meta database. The prior art does not disclose all of these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the method for ~~generating information on new solutions for solving problems, the information service~~ providing system, the recording medium having instructions for providing a solution to a problem, or the method for generating information at an engineering portal site, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34 of the present invention.

Syeda-Mahmood provides a network server that interfaces a client with selected database sites from a plurality of database sites. The network server includes a meta-database (including both text information and multimedia information), a search agent, and a refining module. The search agent indexes the meta-database with a user query obtained

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from the client, and then distributes queries, developed pursuant to such indexing, to the selected ones of the plurality of database sites. In turn, database site information (responsive to the distributed queries) is retrieved from the selected ones of the plurality of database sites. A refining module is used to update the meta-database with the database relevancy information.

One feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past. The case database is provided within a server. Syeda-Mahmood does not disclose searching either one of a meta database or a case database, as claimed.

To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22. However, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4''. At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4'', the database sites are categorized based on the query type at the earlier level and is further grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database and case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Examiner's response:

Claims 1-5, 8-13, 34 and 43 are cover by the references of Nizzari, Thalhammer, Ahamed. There is no mention of generating information at an engineering portal site in claims 1, 8, 11. 'Meta database' of applicant is equivalent to

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'metadata' of Nizzari. (Nizzari, C5:37-46) or a case database 'Case database' of applicant is equivalent to 'transaction database' of Nizzari. (Nizzari, Figure 2)

7. In reference to the Applicant's argument:

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server.

Examiner's response:

There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection.

8. In reference to the Applicant's argument:

According to the present invention the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Syeda-Mahmood does not teach all of these features.

For example, Syeda-Mahrnood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the

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present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2', line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship whatsoever to where the meta database of the present invention includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest "searching either one of a meta database or a case database in accordance with the information, the meta database storing information on common rules to resolve each of the plurality of problems, the common rules being extracted from the plurality of problems and being classified according to characteristics of each of the plurality of problems, the meta database being provided within a second apparatus including a content offer server in advance, the case database storing information on a plurality of problems which, have occurred in the past, and the case database being provided within a server in accordance with the information" as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34.

Furthermore, Syeda-Mahmood fails to teach or suggest "searching said meta database, if it is determined that the meta database is to be searched, or searching said case database, if it is determined that the meta database is not to be searched, for a rule for solving the problem in response to the instruction received, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions for any of the plurality of problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the problems, each example, including an instrument having a predetermined function according to the plurality of rules to determine information on a relationship between one of the solutions and, one of the problems to be solved thereby to generate data regarding the examples of new solutions" as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Examiner's response:

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'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer.

'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant.

(Thalhammer, abstract, C10:25-45, C4:11-30)

9. In reference to the Applicant's argument:

Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the method for generating information on new solutions for solving problems, the information service providing system, the recording medium having instructions for providing a solution to a problem, or the method for generating information at an engineering portal site, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34 of the present invention.

Baker discloses a diagnostic systems utilizing a Bayesian network model having link weights updated experientially including an algorithm for easily quantifying the strength of links in a Bayesian network, a method for reducing the amount of data needed to automatically update the probability matrices of the network on the basis of experiential knowledge, and methods and algorithms for automatically collecting knowledge from experience and automatically updating the Bayesian network with the collected knowledge. An exemplary embodiment provides a trouble ticket fault management system for a communications network. The exemplary embodiment is particularly appropriate for, using the automatic learning capabilities of the invention. In the exemplary embodiment, a communications network is represented as a Bayesian network where devices and communication links are represented as nodes in the Bayesian network. Faults in the communications network are identified and recorded in the form of a trouble ticket and one or more probable causes of the fault are given based on the Bayesian network calculations. When a fault is corrected, the trouble ticket is updated with the knowledge learned from correcting the fault. The updated trouble ticket information is used to automatically update the appropriate probability matrices in the Bayesian network.

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One feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching either one of a meta database or a case database in accordance with the information. According to the present invention, the meta database stores information on common rules to resolve each of the plurality of problems, where the common rules are extracted from the plurality of problems classified according to a characteristic of each of the plurality of problems. The meta database is provided within a second apparatus including a content offer server in advance. Also according to the present invention, the case database stores information regarding a plurality of problems that have occurred in the past.

The case database is provided within a server. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Examiner's response:

There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection. The phrase "common rule" or "common rules" is not mentioned within the specification. The specification does not describe this feature.

10. In reference to the Applicant's argument:

Another feature of the present invention, as recited in claim 1, and as similarly recited in claims 8, 11, 12, and 34, includes searching the meta database, if it is determined that the meta data base is to be searched, or searching the case database, if it is determined that the meta database is not to be searched. After this determination, either the meta database or the case database is searched for a rule for solving the a problem in response to the instruction received at the site server. According to the present invention the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. Also according to the present invention, the case database contains new solutions to solve the problems. Each example includes an instrument having a predetermined function according to the plurality of rules to determine information regarding a

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relationship between one of the solutions and one of the problems to be solved to generate data regarding the examples of new solutions. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest "searching in either one of a meta database or a case database in accordance with the information, the meta database storing information on common rules to resolve each of the plurality of problems, the common rules being extracted from the plurality of problems and being classified according to characteristics of each of the plurality of problems. the meta database being provided within a second apparatus including a content offer server in advance, the case database storing information on a plurality of problems which have occurred in the past, and the case database being Provided within a server, accordance with the information" as recited in claim 1 and as similarly recited in claims 8, 11, 12, and 34.

Furthermore, Baker fails to teach or suggest "searching said meta database, if it is determined that the meta database is to be searched, or searching said case, database, if it is determined that the meta database is not to be searched, for a rule for solving the problem in response to the instruction received, the meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions for any of the plurality of problems, each of the rules being a physical, or chemical rule having been indexed by both an improving physical or chemical, parameter and a deteriorating physical or chemical parameter in advance, the case database containing the new solutions to solve the problems, each example, including an instrument having a predetermined function according to the Plurality of, rules to determine information on a relationship between one of the solutions and one of the problems to be solved thereby to generate data regarding the examples of new solutions" as recited in claim 1 and as similarly recited in claims 8, 11, 12, and 34.

Examiner's response:

There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection. 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create

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domain specific applications which is equivalent to 'new solutions' of applicant.

(**Thalhammer**, abstract, C10:25-45, C4:11-30) 'Case database' of applicant is equivalent to 'transaction database' of Nizzari. (**Nizzari**, Figure 2)

11. In reference to the Applicant's argument:

B. Claims 30 and 39

The present invention, as recited in claim 30, includes provides a method for generating information on solutions for solving problems, the generated information being output to a display at a site server. The method includes determining whether or not a meta database is to be searched in accordance with information on a database to be searched. The method also includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to generate a relationship between each solution and each problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. The method also includes displaying data on the display at the site server regarding examples of new solutions to solve the problems input by the user along with a corresponding instrument, based on a search result and with corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when a morphologic observation is selected as the analysis selection. The prior art does not disclose all these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the

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features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

As previously discussed, Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the method for generating information, as recited in claim 30 of the present invention.

One feature of the present invention, as recited in claim 30, includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to generate a relationship between each solution and each problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Syeda-Mahmood does not disclose this feature.

For example, Syeda-Mahmood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2, line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship whatsoever to where the meta database of the present invention includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

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Examiner's response:

There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection. The phrase "common rule" or "common rules" is not mentioned within the specification. The specification does not describe this feature. 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. (**Thalhammer**, abstract, C10:25-45, C4:11-30) 'Case database' of applicant is equivalent to 'transaction database' of Nizzari. (**Nizzari**, Figure 2) Ordering samples in degree of difficulty in terms of destroying them seems in reverse order. The Examiner questions how one can order the degree of difficulty in terms of destroying physical samples before actually destroying them. 'Meta database' of applicant is equivalent to 'metadata' of Nizzari. (**Nizzari**, C5:37-46) The phrases "actual example" or "actual examples" is not within the specification.

12. In reference to the Applicant's argument:

By way of further example, Syeda-Mahmood does not teach or suggest a meta database or a case database, as claimed. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case

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database stores information on a plurality of problems that have occurred in the past. To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22. However, as previously discussed, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4". At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4", the database sites are categorized based on the query type at the earlier level and is further grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest "searching, at the site server, in response to an instruction including the information on the database to be searched related to the problem input by a user, the meta database. if it is determined the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched. for a rule for solving problem, the meta database including a plurality of rules extracted from a plurality of, actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to generate a relationship between each solution and each problem to be solved thereby, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument" and "wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems" and "wherein the case database stores information on a plurality of problems which have occurred in the past" as recited in claim 30.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually, or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

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As previously discussed, Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the method for generating information on new solutions for solving problems, as recited in claim 30 of the present invention.

One feature of the present invention, as recited in claim 30, includes searching either a meta database or a case database for a rule for solving a problem, in response to an instruction including the information on the database to be searched. If it is determined that the meta database is to be searched, then the meta database is searched. If it is determined that the meta database is not to be searched, then case database is searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to generate a relationship between each solution and each problem to be solved. The instruction is related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest searching, at the site server, in response to an instruction including the information on the database to be searched related to the problem input by a user. the meta database. if it is determined the, meta database is to be searched, or searching a case database, if it is determined, that the meta database is not to be searched, for a rule for solving a problem, the, meta database including a plurality of rules extracted from a plurality of actual examples regarding new solutions to solve problems, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deterioratina physical or chemical parameter in advance, each of the examples including an analytical instrument to aenerate a relationship between each solution and each problem to be solved thereby. the instruction being related to a combination of a state selection, a Dart selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument" and "wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems" and "wherein the case database stores information on a plurality of problems which have occurred in the past" as recited in claim 30.

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Examiner's response:

'Meta database' of applicant is equivalent to 'metadata' of Nizzari. (**Nizzari**, C5:37-46) 'Case database' of applicant is equivalent to 'transaction database' of Nizzari. (**Nizzari**, Figure 2) The phrase "common rule" or "common rules" is not mentioned within the specification. The specification does not describe this feature. The statement 'The meta-database is further divided into a first level 4' and a second level 4". is not in any of the claims. The phrase 'site server' is not within the specification. 'Improving' or 'deteriorating' is equivalent to adjusting parameters. 'Chemical rule' of applicant is equivalent to 'chemical process' of Thalhammer. 'Improving' and 'deteriorating' of parameters of applicant is equivalent to 'parameters adjusting' of Thalhammer. 'Database containing new solutions' of applicant is disclosed by the 'database interface capabilities' of Thalhammer. This interface allows the user to create domain specific applications which is equivalent to 'new solutions' of applicant. (**Thalhammer**, abstract, C10:25-45, C4:11-30) There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection.

13. In reference to the Applicant's argument:

C. Claims 31-33 and 40-42

The present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, provides an information service providing system including means for accepting data. The data includes information regarding a database to be searched about a problem from a user

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who requests an information service. The system also includes means for determining whether or not a meta database is to be searched in accordance with the information on the database to be searched. Also included in the system is a means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. The system further includes a means for displaying the new solutions to solve the problem, along with corresponding instruments based on a search result and the corresponding rules in the plurality of rules in the meta database, history of input instructions, and a plurality of instruments in the solutions with their priority levels in an order of degree of difficulty in destroying a sample to be analyzed when morphological observation is selected as the analysis selection. The prior art does not disclose all these features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

As previously discussed, Syeda-Mahmood teaches a system for selecting multimedia databases over networks. However, there is no teaching or suggestion in Syeda-Mahmood of the information service providing system or the recording medium having instructions for providing a solution to a problem, as recited in claim 31, and as similarly recited in claims 32 and 33 of the present invention.

One feature of the present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, includes means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem.

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Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Syeda-Mahmood does not disclose this feature.

For example, Syeda-Mahmood does not teach or suggest where the meta database includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter. This feature of the present invention is shown, for example, on Fig. 3 and is described in the accompanying text. To support the assertion that Syeda-Mahmood teaches this feature, the Examiner cites column 1, line 65 to column 2, line 16. However, neither the cited text nor any other portion of Syeda-Mahmood discloses the claimed feature. The cited text provides background information regarding the invention, including problems sought to be overcome by the Syeda-Mahmood system. For instance, the text describes where if a query is posed to several databases, the answers may need consolidation and summarization before they can be presented to a user. This has no relationship whatsoever to where the meta database of the present invention includes a plurality of rules extracted from a plurality of actual examples regarding new solutions, each of the rules being either a physical or chemical rule indexed by both an improving physical or chemical parameter, and a deteriorating physical or chemical parameter, as claimed.

By way of further example, Syeda-Mahmood does not teach or suggest a meta database or a case database, as claimed. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. To support the assertion that Syeda-Mahmood discloses a meta database and a case database, the Examiner cites column 5, line 39 to column 6, line 22. However, as previously discussed, neither the cited text nor any other portions of Syeda-Mahmood teach or suggest the claimed features. For example, as described in the cited text, Syeda-Mahmood describes a meta-database 4, as shown in Fig. 2. The meta-database is further divided into a first level 4' and a second level 4". At the first level 4', the databases at web sites can be categorized into groups based on the type of queries they support and the types of media data they house. At the second level 4", the database sites are categorized based on the query type at the earlier level and is further

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grouped based on scope and relevancy data for handling image content-based content queries. These features of both the first level and the second level of the meta database 4 of Syeda-Mahmood are quite different from the meta database and case database of the present invention. More specifically, the first level of Syeda-Mahmood is not a case database, where the case database stores information on a plurality of problems that have occurred in the past, and the second level of Syeda-Mahmood is not a meta database, where the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems, as claimed.

Therefore, Syeda-Mahmood fails to teach or suggest "means for searching the meta database, if it is determined that the meta database is to be searched. Or searching a case database, if it is determined that the meta database is not to be searched. where the meta database and the case database have been provided in a content offer server in advance. for a rule for solving the problem in response to an instruction input by the demander and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem, each of the rules being a physical or chemical rule having been indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument" and "wherein the meta database stores information on common rules to resolve the problem. the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the, plurality of problems" and "wherein the case database stores information on a plurality of problems which have occurred in the past" as recited in claim 31, and as similarly recited in claims 32 and 33.

The above noted deficiencies of Syeda-Mahmood are not supplied by any of the other references of record, namely Baker, whether taken individually or in combination with each other. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Examiner's response:

Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari. (Nizzari, C6:59 through C7:21) The statement 'The meta-database is further divided into a first level 4' and a second level 4'. is not in any of the

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claims. There is no method described within the specification that determines which database is to be searched. See 35 U. S. C. §112 rejection.

14. In reference to the Applicant's argument:

As previously discussed, Baker teaches a diagnostic system using a Bayesian network model having link weights updated experimentally. However, there is no teaching or suggestion in Baker of the information service providing system or the recording medium having instructions for providing a solution to a problem, as recited in claim 31, and as similarly recited in claims 32 and 33 of the present invention.

One feature of the present invention, as recited in claim 31, and as similarly recited in claims 32 and 33, includes means for searching for a rule for solving the problem in response to an instruction input by the user and in accordance with the information on the database to be searched. The meta database is searched, if it is determined that the meta database is to be searched, and a case database is searched, if it is determined that the meta database is not to be searched. The meta database includes a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem. Each of the rules is a physical or chemical rule indexed by both an improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance. Each of the examples includes an analytical instrument to determine information on a relationship between the new solution and the problem to be solved. The instruction is related to a combination of state selection, a part selection and an analysis condition of selection, and a corresponding solution including a combination of an analytical technique and the analytical instrument. According to the present invention, the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems. Also according to the present invention, the case database stores information on a plurality of problems that have occurred in the past. Baker does not disclose this feature, and the Examiner does not rely upon Baker for teaching this feature.

Therefore, Baker fails to teach or suggest "means for searching the meta database, if it is determined that the meta database is to be searched, or searching a case database, if it is determined that the meta database is not to be searched, where the meta database and the case database have been provided in a content offer server in advance, for a rule for solving the problem in response to an instruction input by the demander and in accordance with the information on the database to be searched, the meta database including a plurality of rules extracted from a plurality of actual examples regarding a new solution to solve the problem,

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each of the rules being a physical or chemical rule having been indexed by both an, improving physical or chemical parameter and a deteriorating physical or chemical parameter in advance, each of the examples including an analytical instrument to determine an information on a relationship between the new solution and the problem to be solved, the instruction being related to a combination of a state selection, a part selection and an analysis condition of selection, and a corresponding solution comprising a combination of an analytical technique and the analytical instrument" and "wherein the meta database stores information on common rules to resolve the problem, the common rules being extracted from a plurality of problems and being classified according to characteristics of each of the plurality of problems" and "wherein the case database stores information on a plurality of problems which have occurred in the past" as recited in claim 31, and as similarly recited in claims 32 and 33.

Both Syeda-Mahmood and Baker suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Syeda-Mahmood and Baker in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43 as being unpatentable over Syeda-Mahmood in view of Baker are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 1-5, 8-13, 16, 17, 20, 21, 24, 25, and 28-43.

Examiner's response:

Searching for a rule for solving the problem of applicant is accomplished by the pattern detection module of Nizzari. (Nizzari, C6:59 through C7:21) There is no method described within the specification that determines which database is to be searched.

See 35 U. S. C. §112 rejection.

15. In reference to the Applicant's argument:

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H. Claims 6, 7, 14, 18, 22, and 26

Claims 6, 7, 14, 18, 22, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Syeda-Mahmood in view of Baker, further in view of U.S. Patent No. 6,571,251 to Koski, et al. ("Koski"). This rejection is traversed for the following reasons. Claims 6, 7 and 14 are dependent on claim 1, claim 18 is dependent on claim 8, claim 22 is dependent on claim 11, and claim 26 is dependent on claim 12. Therefore, Applicants submit that dependent claims 6, 7, 14, 18, 22, and 26 are allowable for at least the same reasons previously discussed regarding independent claims 1, 8, 11, and 12.

Examiner's response:

Nizzari and Scholz are references used in claims 6, 7, 14, 22, 26.

16. In reference to the Applicant's argument:

III. Claims 15, 19, 23, and 27

Claims 15, 19, 23, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Syeda-Mahmood in view of Baker, further in view of U.S. Patent No. 6,772,103 to King. This rejection is traversed for the following reasons. Claim 5 is dependent on claim 1, claim 19 is dependent on claim 8, claim 23 is dependent on claim 11, and claim 27 is dependent on claim 12. Therefore, Applicants submit that dependent claims 15, 19, 23, and 27 are allowable for at least the same reasons previously discussed regarding independent claims 1, 8, 11, and 12.

Furthermore, as discussed in the Amendment filed on May 18, 2006, King's system, which is in a field entirely different from that of the present invention, is nonanalogous art. As provided in MPEP 2141.01(a), a reference relied upon under 35 U.S.C. §103 must be analogous prior art. Specifically, "the reference must either be in the field of Applicants' endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). The U.S. Patent and Trademark Office classified King's method for selecting a parts kit detail under Data Processing: Structural Design, Modeling, Simulation, and Emulation (Class 703). This class has no relationship to the subject matter of the present invention, which has been classified under Data Processing: Database and File Management or Data Structures (Class 707). Therefore, Applicants submit that King is not in the field of Applicants' endeavor. Furthermore, King is not reasonably pertinent to the

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particular problem with which the inventor was concerned. Therefore, this rejection should be withdrawn.

Examiner's response:

Kubo is used for claims 15, 19, 23, 27. Kubo is in the same field and is the same assignee as applicant.

17. In reference to the Applicant's argument:

New claims 44-47,

New claims 44-47 were added to more clearly describe features of the present invention. The subject matter of claims 44-47 is fully supported by the specification, for example, at Figs. 2 and 3 and the accompanying text. Applicants submit that the features of the present invention, as recited in claims 44-47, are not taught or suggested by either Syeda-Mahmood or Baker, whether taken individually or in combination with each other.

For example, both Syeda-Mahmood and Baker fail to teach or suggest "means for searching for a rule for solving the problem in the meta database, if it is determined that the meta database is to be searched. or searching a case database. if it is determined that the meta database is not to be searched, wherein the meta, database includes a table having a first plurality of entries including at least one, desired-to-improve parameter and at least one deteriorated parameter, the table arranged such that each of the at least one desired-to-improve parameter cross references each of the at least one deteriorated parameter, and the first plurality of entries further including at least one solution rule number corresponding to a combination of the at least one desired-to-improve parameter and the at least one deteriorated parameter, the combination being obtained by cross-referencing one of the at least one desired-to-improve parameter with one of the at least one deteriorated parameter" as recited in claim 44 and as similarly recited in claim 46.

By way of further example, both Syeda-Mahmood and Baker fail to teach or suggest, "wherein the case database includes a second plurality of entries. including a field of the problem. a desired-to-improve parameter. a deteriorated parameter. a solution rule number. a oroblem name. and a solution to the problem" as recited in claim 45, and as similarly recited in claim 47.

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In view of the foregoing amendments and remarks, Applicants submit that claims 1-47 are in condition for allowance. Accordingly, early allowance of claims 1-47 is respectfully requested.

Examiner's response:

Nizzari and Ahamed are used for claims 44 and 46. Savitch is used in combination with Nizzari and Ahamed. Savitch discloses a tool in C++ programming called a 'structure' in which data of different and various combinations can be combined within a single record.

Examination Considerations

18. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

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19. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

20. Examiner's Opinion: Paragraphs 18 and 19 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

21. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure.

-U. S. Patent 6049738: Kayama

-U. S. Patent 5960402: Embutsu

-U. S. Patent 5930136: Nakajima

-U. S. Patent 5806058: Mori

-U. S. Patent 6113540: Iliff

-U. S. Patent 5978811: Smiley

-U. S. Patent 5935060: Iliff

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-U. S. Patent 4805099: Huber

22. Claims 1-47 are rejected.

Correspondence Information

23. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3080. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

Hand delivered to:

Receptionist,

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Customer Service Window,

Randolph Building,

401 Dulany Street,

Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 272-3150 (for formal communications intended for entry.)

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Peter Coughlan

2/16/2007



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